

Amendments to the Specification

Please replace paragraph [0006] with the following rewritten paragraph:

[0006] In the present invention, the two conductive solid materials are joined along the gravity direction, and static magnetic field is applied to the joined conductive solid material along a direction orthogonal to the gravity direction. Then, the joined conductive material is heated and melted, and maintained for a predetermined period of time. In the maintaining process of the joined conductive material which is melted, therefore, convection in the melt is repressed effectively by choosing this orthogonal direction, so that the two conductive materials which are joined and melted can be diffused each other. As a result, the diffusion coefficient between the two conductive materials in the melt can be measured precisely. Herein, the “diffusion coefficient” means inter-diffusion coefficient between the two conductive materials.

Please replace paragraph [0017] with the following rewritten paragraph:

[0017] In this state, the conductive melts X' and Y' diffuse each other. As mentioned above, since the static magnetic field B is applied orthogonal to the conductive melts X' and Y' in the maintaining process, convection in the melts X' and Y' can be repressed effectively by choosing this orthogonal direction, so that the diffusion process of the melts X' and Y' can be performed precisely.